

CM9750-REL Series Relay Interface

Installation/ Operation Manual

C534M (2/98)

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REVISION HISTORY

Manual #	Date	Comments
C534M	2/98	Original version

1.0 GENERAL

1.1 IMPORTANT SAFEGUARDS AND WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should only be done by Qualified Service Personnel and conform to all Local codes.
2. Only use replacement parts recommended by Pelco.
3. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.

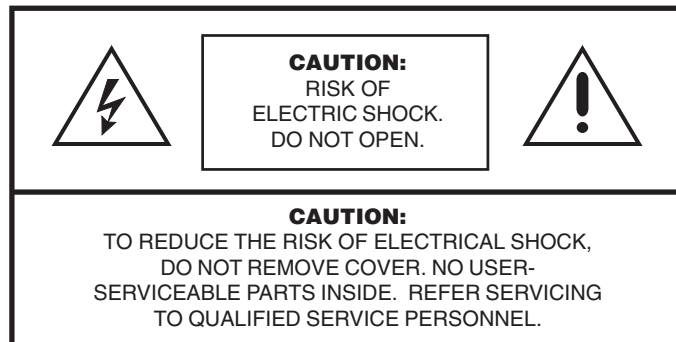
The product and/or manual may bear the following marks:



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

2.0 DESCRIPTION

The Relay Interface units of the CM9750-REL Series provide up to 32 relay contacts for operating external equipment such as VCRs and lights. (The unit is shipped from the factory equipped with 16 outputs.) Each of the relays can be configured for normally open or normally closed operation by the placement of internal jumpers. The unit is shipped with the contacts in the normally open position. Each Relay Interface unit provides outputs for four GPIs (each GPI controls 8 relays). Refer to Figure 1 for the front and rear view of the unit.

2.1 MODELS

- CM9750-REL16 Provides 16 relay outputs. Includes transformer to convert 120 VAC to 24 VDC.
- CM9750-REL16-X Same as CM9750-REL16 except has 230 VAC transformer.

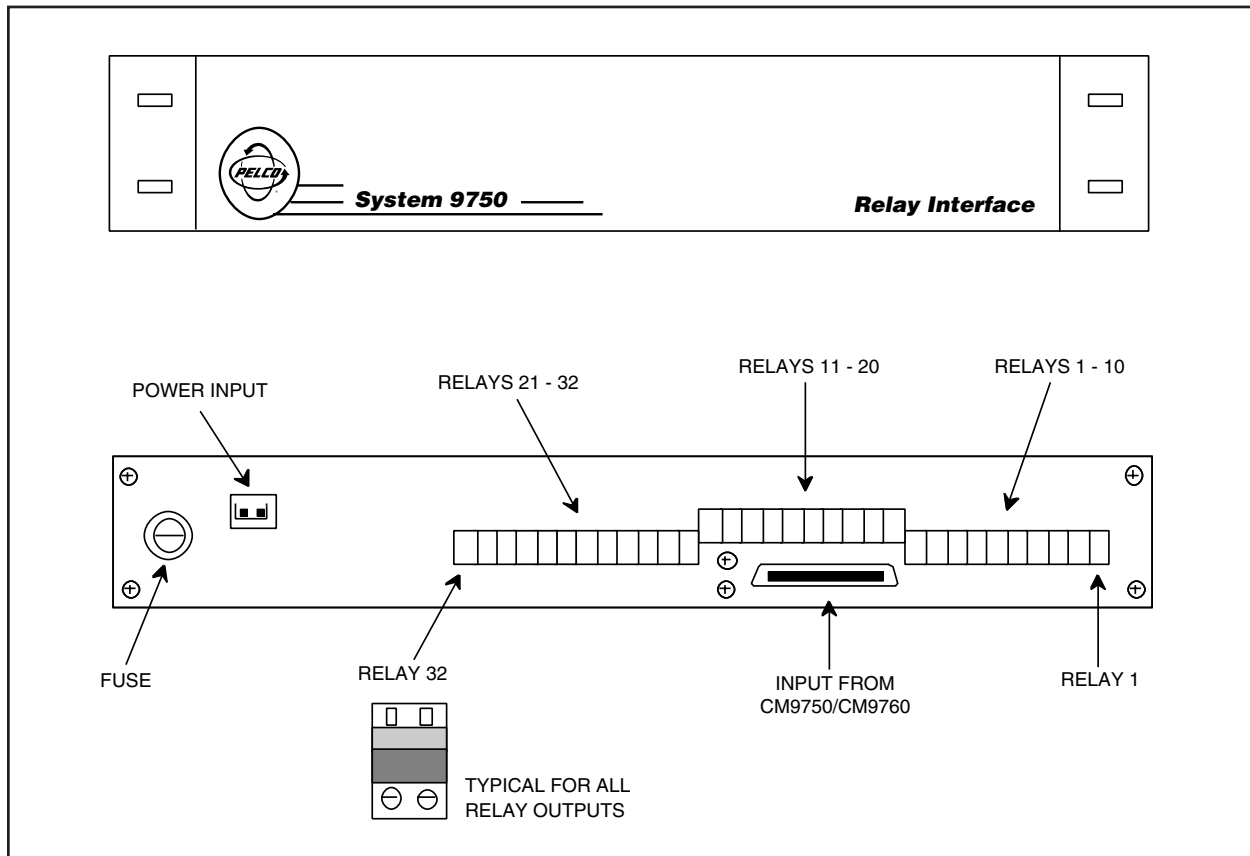


Figure 1. Front and Rear Views of the CM9750/CM9760 Relay Interface Unit

2.2 CIRCUIT DESCRIPTION

The Relay Interface consists of two relay cards (with additional room for two more), one motherboard, and one power supply board. The unit receives TTL level signals from the GPI SPINC card (located in the CM9750/CM9760 Controller) through the 50-pin connector on the rear panel of the unit. This TTL signal is then inverted and applied to the corresponding relay to close the contact. The position of the strap determines the condition of the output. Refer to Figure 2.

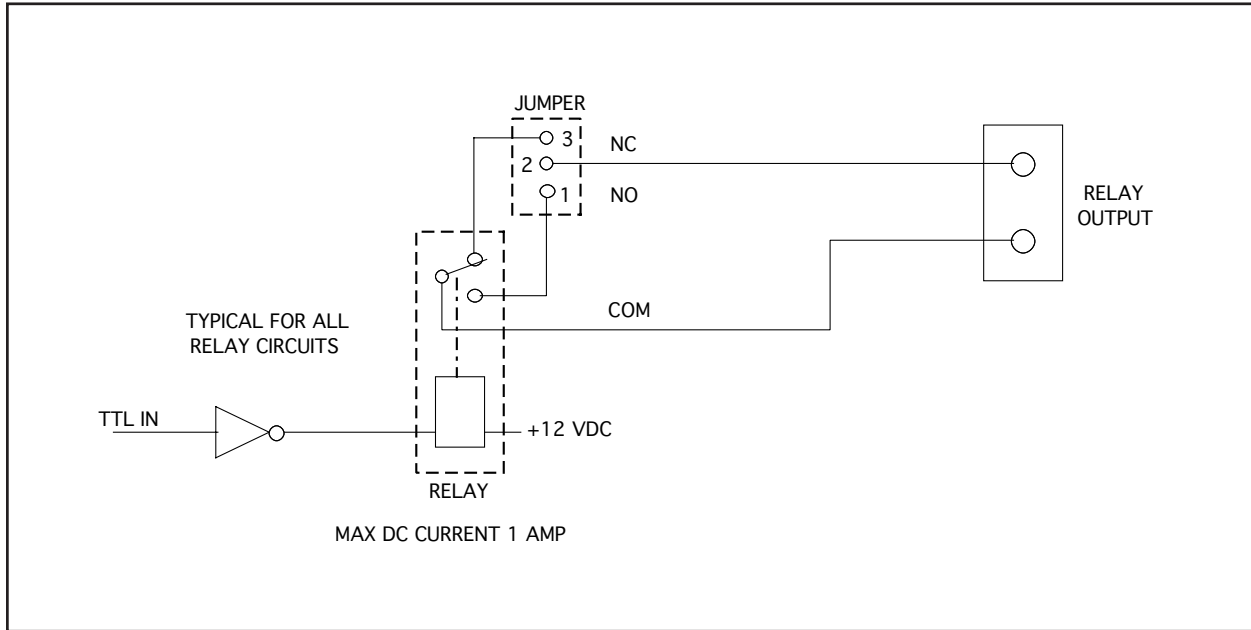


Figure 2. Relay Output Functional Schematic

3.0 INSTALLATION

3.1 MOUNTING INSTRUCTIONS

NOTE: *The Relay Interface unit can be configured to provide either normally open or normally closed relay outputs. The unit is shipped with all outputs in the normally open mode of operation. If you need to configure outputs for normally closed operation, refer to Sections 3.5 and 3.6 prior to mounting the unit.*

The Relay Interface mounts in a 19-inch (48.26 cm) rack using standard mounting hardware. The unit occupies 1 rack unit (1.75 in. or 4.45 cm) of vertical space. The unit operates on TTL signals from the Controller. Because of distance limitations, the unit must be mounted in the same rack as the Controller for proper operation.

3.2 CONNECTING TO THE CONTROLLER

The unit comes equipped with a pretested, 3-foot (0.91m) ribbon cable to connect to the SPINC card located in the Controller. Prior to connecting the equipment, refer to the Controller Manual for installation information.

To connect the two pieces of equipment, connect the supplied cable to the 50-pin connectors located on the Relay Interface and the Controller. Refer to Table A for the connector pin assignments.

3.3 CONNECTING POWER

The unit comes equipped with a 120 VAC or 230 VAC to 24 VDC wall-mount transformer. Plug the transformer into an appropriate location and connect the other end to input connector on the rear of the unit. The unit is operational once power is applied to the unit.

Table A. 50-Pin Connector

Function	Pin	Function	Pin
+5V	50	+5V	25
+12V	49	-12V	24
NC	48	NC	23
NC	47	NC	22
NC	46	GND	21
GPI 1 (8)	45	GPI 1 (7)	20
GPI 1 (6)	44	GPI 1 (5)	19
GPI 1 (4)	43	GPI 1 (3)	18
GPI 1 (2)	42	GPI 1 (1)	17
NC	41	GND	16
GPI 2 (8)	40	GPI 2 (7)	15
GPI 2 (6)	39	GPI 2 (5)	14
GPI 2 (4)	38	GPI 2 (3)	13
GPI 2 (2)	37	GPI 2 (1)	12
NC	36	GND	11
GPI 3 (8)	35	GPI 3 (7)	10
GPI 3 (6)	34	GPI 3 (5)	9
GPI 3 (4)	33	GPI 3 (3)	8
GPI 3 (2)	32	GPI 3 (1)	7
NC	31	GND	6
GPI 4 (8)	30	GPI 4 (7)	5
GPI 4 (6)	29	GPI 4 (5)	4
GPI 4 (4)	28	GPI 4 (3)	3
GPI 4 (2)	27	GPI 4 (1)	2
GND	26	GND	1

3.4 WIRING THE RELAY OUTPUTS

Refer to Figure 3. Select the desired relay output and insert the wires to be used into the square holes in the terminal. Tighten the screws until the wires are properly secured.

3.5 INSTALLING AND REMOVING THE RELAY CARDS

To install or remove any of the relay cards, remove the top cover to the unit. Refer to Figure 4 for the identification of each board.

To remove a specific board, remove the mounting hardware (four Phillips screws) and disconnect the two ribbon cables connecting the relay card to the mother board. The card can now be removed from the unit.

3.6 CHANGING THE JUMPER LOCATIONS

NOTE: Each board is the same and therefore has the same silkscreen identification for the relays and jumpers.

Remove the desired board(s) as described Section 3.5.

Next, determine which output you wish to change. Once decided, refer to Table B for the corresponding board and jumper.

Once the proper board has been determined, gain access to the desired jumper and place in the desired setting. Refer to Figure 5 for the jumper pin assignments.

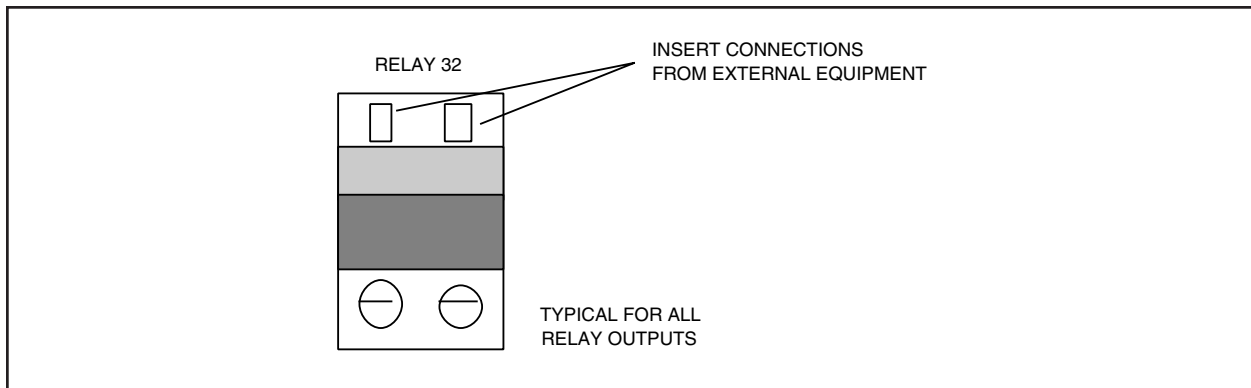


Figure 3. Wiring External Equipment to the Relay Outputs

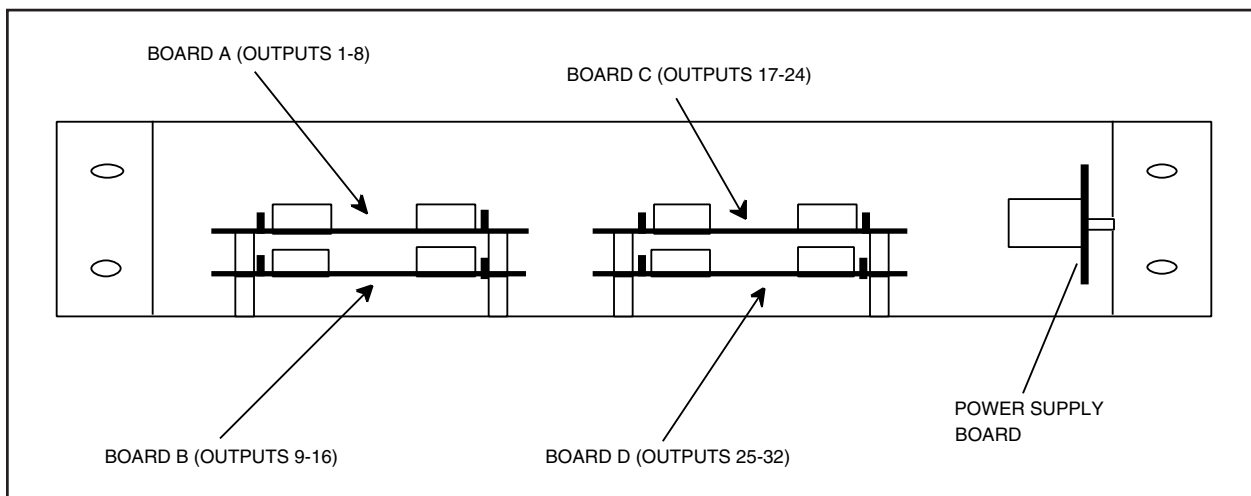


Figure 4. Relay Card Location

Table B. Relay/Jumper Reference Chart

Relay	Board/Jumper	GPI	Relay	Board/Jumper	GPI
1	A/J1	1 (1)	17	C/J1	3 (1)
2	A/J2	1 (2)	18	C/J2	3 (2)
3	A/J3	1 (3)	19	C/J3	3 (3)
4	A/J4	1 (4)	20	C/J4	3 (4)
5	A/J5	1 (5)	21	C/J5	3 (5)
6	A/J6	1 (6)	22	C/J6	3 (6)
7	A/J7	1 (7)	23	C/J7	3 (7)
8	A/J8	1 (8)	24	C/J8	3 (8)
9	B/J1	2 (1)	25	D/J1	4 (1)
10	B/J2	2 (2)	26	D/J2	4 (2)
11	B/J3	2 (3)	27	D/J3	4 (3)
12	B/J4	2 (4)	28	D/J4	4 (4)
13	B/J5	2 (5)	29	D/J5	4 (5)
14	B/J6	2 (6)	30	D/J6	4 (6)
15	B/J7	2 (7)	31	D/J7	4 (7)
16	B/J8	2 (8)	32	D/J8	4 (8)

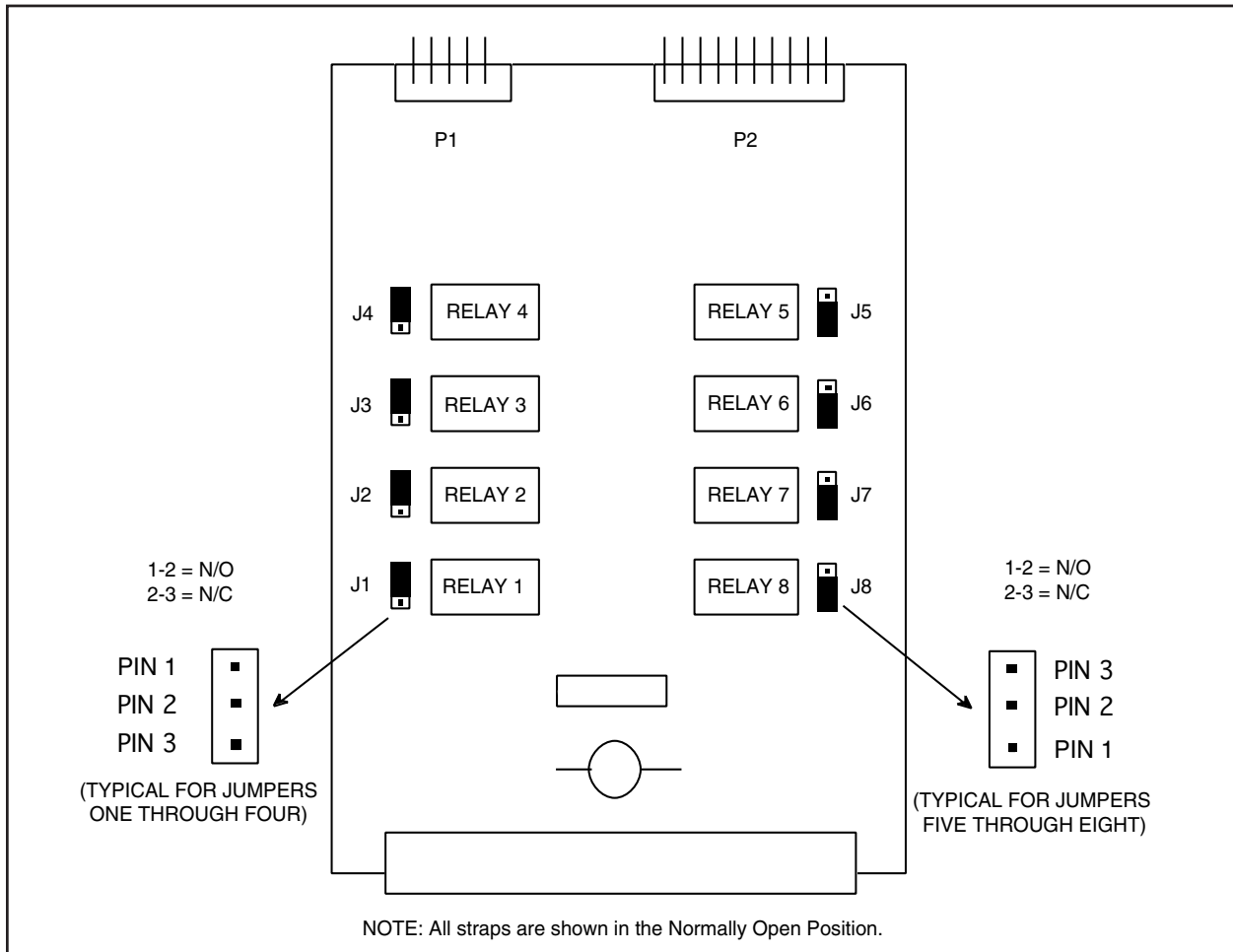


Figure 5. Relay Card Jumper Locations

4.0 OPERATION

There are no specific operating instructions for the unit. The unit begins operation once power is applied. All operating commands are issued from the appropriate CM9750/CM9760 Keyboard(s) as defined in the Setup File. For additional information on the operation of the Relay Interface unit (GPI relays), refer to the Operation Manual or to the System Administrator Manual.

5.0 MAINTENANCE

5.1 REPLACING THE FUSE



WARNING: Always replace a blown fuse with a fuse of the same rating. Failure to do so could result in serious damage to the unit.

The unit is equipped with a 2A fuse on the input. The fuse holder is located on the rear panel of the unit. To replace the fuse, first remove power to the unit by disconnecting the power at the wall socket. Rotate the fuse holder counterclockwise until the fuse holder comes out of its receptacle. Replace the fuse.

NOTES

6.0 WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years on FT/FR8000 Series fiber optic products.
- Three years on Genex® Series products (multiplexers, server, and keyboard).
- Three years on Camclosure® and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra®, Esprit®, ExSite™, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit® and WW5700 Series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, and Endura™ Series distributed network-based video products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge. Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:

Service Department
Pelco
3500 Pelco Way
Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:

If the goods are to be sent by a COURIER SERVICE, send the goods to:

Pelco
3500 Pelco Way
Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:

Pelco c/o Expeditors
473 Eccles Avenue
South San Francisco, CA 94080 USA
Phone: 650-737-1700
Fax: 650-737-0933

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